FOR DEBATE

Alcohol Misuse Y91 Coding in ICD-11: Rational Terminology and Logical Coding Specifically to Encourage Early Identification and Advice

Robin Touquet* and Dan Harris

Department of Emergency Medicine, Kingston Hospital, Galsworthy Road, Kingston upon Thames, Surrey KT2 7QB, UK

*Corresponding author: E-mail: robintoquet@uk2.net

Abstract — Alcohol misuse is a common presentation to the Emergency Department (ED). The International Classification of Diseases ICD-10 for alcohol misuse, both under F10 and Y90/Y91, is not straightforward. The practicalities of coding ED attendances reveal an increasing detachment from ICD-10 (currently under review). Early identification [sometimes using blood alcohol concentrations (BACs)] and brief advice (IBA) can reduce unscheduled alcohol-related ED re-attendance. The UK Government Department of Health has implemented use of the terms ‘Hazardous Drinking’, ‘Harmful Drinking’ and ‘Dependent Drinking’ in its Public Service Agreements aimed at reducing harm by alcohol. Simplifying coding might increase IBA usage. We suggest that coding improvements in ICD-11 should update Y91 (currently ‘clinical assessment’) — with ICD-10 Y90 remaining for BAC to classify a patient’s ‘alcohol status’. Y90 and Y91 together would indicate the urgency for early IBA and/or speciality referral, aiming to reduce the prevalence of ‘Dependent Drinking’.

Multi-criteria decision analysis shows that alcohol is the most harmful drug in the UK, with heroin and crack cocaine in second and third places (Nutt et al., 2010). Alcohol misuse is a common presentation to the UK Emergency Department (ED) (Drummond et al., 2005). Chapter 20, ‘External Causes of Morbidity and Mortality’, of the International Classification of Diseases 10th Edition (World Health Organization, 1992: ICD-10) offers a supplementary code to specify the level of alcohol involvement, particularly in cases of injury or ED attendance: code Y90 — evidence of alcohol involvement determined by blood alcohol concentration (BAC) or, if no Y90, code Y91 — evidence of alcohol involvement determined by level of intoxication. This is offered in addition to coding under F10, which is defined in Chapter 5, ICD10, ‘Mental and Behavioural Disorders’. However coding under F10, and using Y90 or Y91 is not straightforward (Room, 2009).

For the ED clinician, the objective of coding should be the qualifying and quantifying of presenting pathology in order direct resources to benefit patient care, and also if possible to reduce unscheduled re-attendance. Clinical assessment in everyday practice by Y91 — evidence of alcohol involvement by level of intoxication — only has moderate concordance with BAC: Y90 (Cherpitel et al., 2005). Further, BACs are only available in approximately half of acute hospitals in England (Patton et al., 2007), although are increasingly used in USA Trauma Centres (American College of Surgeons, 2006).

Alcohol misuse as classified under F10 is clinically orientated, clear and detailed — intended for general clinical, educational and service use — but some consider F10, perhaps wrongly, to be the province of psychiatrists and psychologists. In F10, F10.0 is for ‘acute intoxication (a transient phenomenon), F10.1 ‘harmful use’, F10.2 ‘dependence syndrome’, F10.3 ‘withdrawal state’, F10.4 ‘withdrawal state with delirium’, with F10.5–F10.9 for more serious pathologies (World Health Organization, 1992). This classification is under review (Sartorius, 2010) and if ICD-11 turns out to be as close to the American Psychiatric Association’s Diagnostic and Statistical Manual (DSM) 5th Edition as ICD-10 was to DSM 4th edition then it will have only one category — alcohol use disorder — defined by degrees of severity (American Psychiatric Association, 2010).

Worryingly, the daily practicalities of coding patient attendances at UK EDs display an increasing detachment from ICD-10. Administrative coding for England’s Healthcare Resource Group allocation (the system of payment to the hospital or ‘Trust’) is linked solely to the complexity of procedures performed at the point of care, e.g. whether radiology was needed or not. This heavily influences the principal data set collected during the administrative discharge of patients from EDs. With the introduction of the English NHS Care Records Service (CRS), the separation from ICD-10 for clinical coding widens further as CRS utilizes ‘Systematized Nomenclature of Medicine—Clinical Terms’ (SNOMED CT, 2007): a vocabulary of clinical terminology developed between the NHS and the College of American Pathologists to describe a patient’s symptoms, diagnosis, treatment and healthcare administration. Comprising over 400,000 unique numerically identified clinical ‘concepts’, which are then associated with over 800,000 descriptive terms, the resulting clinical data naturally focus entirely on the diagnosis (e.g. head injury), while ignoring causative factors (e.g. alcohol consumption). This has been recognized not only within individual EDs struggling to audit their patient cohorts, but by the UK College of Emergency Medicine, which has described the ‘routinely collected coding data’ as ‘not useful or reliable’ in monitoring the burden alcohol consumption places upon modern EDs (College of Emergency Medicine, 2010).

Since 2005 St Mary’s Hospital ED, Paddington, London has requested BACs for all trauma, collapse and psychiatric presentations to the resuscitation room (RR) (Touquet et al., 2008). An easy to remember summary of clinical signs for alcohol misuse has also been detailed (Touquet and Brown, 2009) — with the Anagram: ‘SAFE (Smell, Speech, Affect, Face, Eyes) Moves (fine motor control e.g. acute cerebellar syndrome, and gross motor control e.g. truncal ataxia) ABCD’ (‘Airway, Breathing, Circulation, Disability’) — to alert the ED doctor/nurse to the possibility of alcohol misuse.

BACs are used in the RR, where questionnaires cannot be used (by dint of the reason why many alcohol patients are in
the RR, i.e. being obtunded). A BAC makes the use of Y90 coding easier and more clinically relevant, giving an objective alcohol concentration at the time of presentation.

BAC is increasingly used in the clinical setting, certainly in the USA (American College of Surgeons, 2009). However, at present for the RR patient, a BAC laboratory result from blood takes at least one hour to be available (Touquet et al., 2008). Although a breath concentration can be obtained instantly by breathalyzer, not only is the use of breathalyzers impractical in the RR, but this method seems to be unpopular with ED staff because patients view breathalyzers as judgmental or even judicial.

Alcostick™ (Surescreen Diagnostics, Derby, UK)—is used like a Glucostick on a finger-prick of blood for bed side testing—to give an approximate BAC (approximate so not of legal value). If used within 1–2 min of patient arriving in the RR, it will not only help clinical practice, but will facilitate the use of Y90 coding.

For Y91 coding, Y91.0 is for individual episodes of ‘mild alcohol intoxication’, Y91.1 ‘moderate’, Y91.2 ‘severe’, Y91.3 ‘very severe’ with Y91.9 ‘alcohol involvement, not otherwise specified’. With the introduction in England by the Department of Health (DOH) (Lavoie, 2010) of the term ‘Hazardous Drinking’ alongside ‘Harmful Drinking’ and ‘Dependent Drinking’, the question we ask is how to rationalize Y91 coding with these terms, which are for overall alcohol misuse, as opposed to the current Y91, which is for an episode of drinking? Currently Y91 (clinical assessment) is only used when Y90 is ‘not available’—this currently remains all too often the case in the UK (Patton et al., 2007), though this could be remedied with the use of the ‘Alcostick’ test, which will give a BAC in 1–2 min.

As already stated, F10 has usually not been considered in an emergency environment (Room, 2009). But Y91 could become synonymous with, or even the same as, F10 for use by all clinicians (not just psychiatrists and psychologists) in an upgraded coding for ICD-11, remembering that clinically classifying degrees of intoxication (soberity testing) is notoriously imprecise.

The benefit of such Y91 coding would be to declare the ‘alcohol status’ of the patient. This would be correlated to the degree of possible drunkenness at an isolated clinical presentation as shown by Y90 with BAC levels. This coding would thereby be more clinically relevant, showing the need of 1–2 min of identification and brief advice (IBA) by any speciality (not just in General Practice and Psychiatry) with early referral to an Alcohol Health Worker (AHW).

The advent of AHWs in both primary care and hospital practice has improved standards of patient care. IBA, with the offer of an appointment with the AHW, is effective in reducing re-attendance to the ED (Touquet and Brown, 2009). Increased use of IBA by a wider range of clinicians will lessen the likelihood of the later development of dependency (much more difficult for the patient to overcome). It is all too often forgotten—including by some ED practitioners—that every Dependent drinker was once a Hazardous drinker. But ICD-10 has no coding specifically for ‘Hazardous drinking’—only F10.0 for ‘acute intoxication’.

The DOH four categories of drinking (see below) define ‘Hazardous drinking’ as ‘Increased-risk drinking’, and ‘Harmful drinking’ as ‘Higher-risk drinking’ (Lavoie, 2010). The term ‘Hazardous drinking’ is an especially important for early detection in young people, including Risky Single-Occasion Drinking (Murgraff et al., 1999). For ‘Higher-risk drinking’ (often drinking more than 8 of 6 units a day for men/women), effective interventions such IBA can have a powerful effect on health risks and in halting or reversing emerging health problems (Lavoie, 2010).

It is because of the beneficial effects of IBA that coding for alcohol misuse should be user-friendly to all clinicians.

We therefore propose what Y91 coding for ICD-11 could be, remembering that this would mean that ICD11 would include non-disease states (proposed 91.0–2) both for completeness and to help highlight a change for the worse (91.3 upwards), remembering that the reformed abstinent dependent drinker is still an ‘alcoholic’, even if currently abstinent (dependence once developed remains for life):

91.0 Abstinent now (perhaps lifelong), plus not previously suffered harm from alcohol nor ever been dependent (e.g. for religious reasons).
91.1 Abstinent now (say for more than 1 year), but previously dependent.
91.2 Not drinking to excess: Not more than 4/3 units per day, with a total of not more than 21/14 per week); for the UK: ‘Lower Risk’ drinking’ (Lavoie, 2010).
91.3 Hazardous: Drinking to excess intermittently, i.e. >8/6 units per day intermittently, but not attending EDs/primary care as a direct result of drinking and showing no consequential actual harm as yet). This matches the English ‘Increasing-risk’ drinking’ (Lavoie, 2010).
91.4 Harmful: Suffering harm as a result of drinking, including attending A&E, e.g. after fall, collapse, head injury, assault, accident etc., but not yet dependent. This matches the UK: ‘Higher-risk’ drinking’ (Lavoie, 2010).
91.5 Dependence: Drinking to excess every day, i.e. >8/6 UK units everyday; for the UK: ‘Dependent drinking’ (Lavoie, 2010).
91.6 Drinking to excess; over 4/3 units in a day, extent and possible harm not quantified.

This revised diagnostic Y91 coding would be based on history both by questionnaire, e.g. Paddington Alcohol Test (Touquet and Brown, 2009) or Rapid Alcohol Problems Screen 4 question (Cherpitel, 2000), both quick and simple, and by reviewing the patient’s medical records.

Y91 would be the clinical consequence of drinking, i.e. ‘alcohol status’, indicating the possible need for AHW referral by the specialty/medical setting that assesses the alcohol-misusing patient. The key is that any contact with the health-services should trigger consideration for IBA.

Y90, with a revised Y91 coding, would help to clarify the need for early identification before dependency sets in. This would encourage best use of ‘the teachable moment’ for ‘opportunistic intervention’—IBA with offer of an AHW appointment—by routine medical and nursing staff (Rollnick et al., 2005). It would also help counter ‘clinical inertia’, failure to act (Phillips et al., 2001), and ‘NIMBY’ism, i.e. ‘not my job’, there still being reluctance by some health workers to view alcohol misuse as ‘their’ clinical problem.

It is to be applauded that the UK Government has, for the first time, entered into a Public Service Agreement for England tasking public agencies to reduce the harm caused by alcohol (Lavoie, 2010).
It is hoped that Y90 (BAC at presentation) and Y91 (‘alcohol status’) coding will be useful to all medical specialties, and that for England, the NHS Care Records Service (CRS) will take greater note of ICD-11, than it has of ICD-10.

Conflict of interest statement. R.T. is associated with the patent application for ‘Alcostick’.

REFERENCES


